



ENERGY POLICY UPDATE

November 25, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email [Gloria Castro](#).

UPCOMING WEBINARS

ENERGY STAR Webinars

U.S. Dept. of Energy Tribal Renewable Energy Webinar Series for 2014

Making Utility Efficiency Funds Work for You

Dec. 2 1:00 PM -2:00 PM EST
[Click here](#) to register.

Natural Gas Vehicles: Role of Gov't. – Policymaking & Strategy Process Webinar
Dec. 15 - This webinar is open to the general public, and no pre-registration is required. To join the webinar:

- **Audio:** Dial **877-951-7311** and enter passcode **3319370**.
- **Web:** [Log in to MyMeetings](#) with conference number **PW9081297** and passcode **3319370**. You also may [join the webinar directly](#).

UPCOMING EVENTS

2014

Renewable Energy Markets Conference

Dec. 2-4 Sacramento, CA

White House Tribal Nations

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The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

APS Opposes Changes to Efficiency Rules

[Arizona Republic, Nov. 21] Arizona Public Service Co. officials said they don't want to alter the state's energy-efficiency rules, but a group of large power users said it would like to see changes. Arizona requires utilities to conserve 22 percent of electricity sales by 2020. Utilities such as APS and Tucson Electric Power Co. use a variety of strategies, from subsidizing low-power light bulbs to offering rebates on efficient air-conditioners or lighting, to cut down on electricity use. Earlier this month, the Arizona Corporation Commission proposed setting individual efficiency goals for each utility based on whether it is cost effective and eliminating the efficiency requirement it enacted in 2010. APS objects. "Energy-reducing activities accomplished pursuant to the rules serve a valuable role in Arizona's energy future," APS executives wrote in comments filed with the ACC. "Energy efficiency has the potential to help reduce peak load and defer energy purchases or generation facilities, both of which can help APS provide reliable and reasonably priced electric service in Arizona." APS charges a tariff on customer bills that averages about \$2 for residential customers, but is much higher for large businesses, many of which filed their own comments on the issue. A group called Arizonans for Electric Choice and Competition that represents large companies such as FreeportMcMoRan Copper and Gold, Asarco, Rosemont Copper, Walmart, Pestmart, Intel and others, said it supports eliminating the efficiency rule.

ASU Launches New Center for Water Policy

[ASU News, Nov. 14] The Kyl Center for Water Policy at Arizona State University's Morrison Institute for Public Policy was officially launched Nov. 14, made possible by a \$1 million gift from the Morrison family, with a mission to seek consensus for wise water policy and lasting solutions for Arizona. Named after retired U.S. Sen. Jon Kyl, who will lend both his expertise as a water attorney and leadership as a statesman, the Kyl Center will convene a diversity of stakeholders to collaboratively address many of the state's water challenges – just as Arizona leaders successfully did in decades past. "Arizona is going to face some very difficult challenges in the next several years relating to our water," Kyl said. "God isn't making any more of it, and so we have to take of what we have and find out the best way to be good stewards so our children, grandchildren and all who follow us have a bright future like we've had." The Kyl Center will serve as a forum for public evaluation and public education, as well as an alternative to litigation for a

Conference
Dec. 3 Washington, DC

Solar Development on
Landfills and Brownfields
Dec. 8-9 Chicago, IL

ITEP Course: Greening Tribal
Operations and Facilities
Dec. 9-11 San Diego, CA

2015

NAHB Int'l. Builders' Show
Jan. 20-22 Las Vegas, NV

ASHRAE Winter Conference
Jan. 24-28 Chicago, IL

Getting to ZERO Nat'l. Forum
Feb. 1-3 Washington, DC

NASEO Energy Policy
Outlook Conference 2015
Feb. 3-6 Washington, DC

Solar Power Generation USA
Feb. 4-5 San Diego, CA

Energy, Utility & Environment
Conference (EUEC) 2015
Feb. 16-18 San Diego, CA

Sustainability Solutions
Festival
Feb. 16-21

GreenBiz 2015
Feb. 17-19 Phoenix, AZ

GreenBiz Forum 2015
Feb. 17-19 Phoenix, AZ

2015 Sustainability Solution
Festival
Feb. 17-22 Phoenix, AZ

Natural Gas Vehicles +
Infrastructure
Mar. 10-11 Phoenix, AZ

Solar Summit 2015
Apr. 14-15 Phoenix, AZ

CxENERGY 2015 Conference
& Expo
Apr. 27-30 Las Vegas, NV

Alternative Clean Transportation
(ACT) Expo
May 4-7 Dallas, TX

Solar Power Generation Mexico
May 19-20
World Trade Center, Mexico

more expeditious resolution of outstanding issues. It all starts with a "serious conversation" and a commitment to finding solutions, Kyl said.

Important Milestone Reached in Pursuit of Transmission Route on GRIC Lands

[Pinal Partnership, Nov. 11] SRP's two-year effort to pursue a route alternative on the Gila River Indian Community (GRIC) for an important new transmission project is now focused on obtaining right of way consent from more than 4,000 Allottees whose allotments are crossed by the proposed power line. Allottees are individuals with an ownership stake in the GRIC land that would be impacted. This week, more than 4,400 letters offering to purchase right of way were mailed to the Allottees. SRP is seeking consent from the Allottees and agreement to the Grant of Right of Way across these allotments by the Bureau of Indian Affairs (BIA), GRIC leadership and residents of District 4 and the Gila River Indian Community Utility Authority (GRICUA), for a joint project to locate new electrical transmission lines across a portion of the Community. SRP's transmission line project is needed to address continued economic development in the Chandler area known as the Price Road Corridor (PRC). Locating a portion of the power lines on GRIC lands would also allow GRICUA to provide improved electrical service to Community customers, support planned Community renewable energy projects and allow SRP to connect several off-reservation substations in order to improve service to neighboring communities. SRP's offer to purchase this right of way will be open until Dec. 1.

Peoria Sports Complex Gets Environmental Certification

[Arizona Republic, Nov. 19] Peoria's field of dreams has gone "field of green." The Seattle Mariners and San Diego Padres clubhouses and front-office operations at the Peoria Sports Complex have joined an elite group of buildings that have earned a LEED Gold Level certification from the U.S. Green Building Council. These facilities follow the city's attainment of gold-level certification on the Peoria Municipal Court expansion and the Community Center expansion. LEED, which stands for Leadership in Energy and Environmental Design, is a green-building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects must satisfy prerequisites and earn points to achieve different levels of certification. The Peoria Sustainability Action Plan sets forth that all new building construction and major renovations undertaken by the city shall endeavor to achieve a LEED Silver Certification. In order to fulfill this goal, the city has 10 LEED-accredited professionals among its staff who apply sustainability principles to their work products. Environmental stewardship translates to good financial stewardship. The city invests in high-performance buildings to derive long-term energy savings, which equates to lower annual operating costs. Striving for LEED certification is a responsible building practice that shows our commitment to being energy efficient, and the city hopes to serve as model in the industry. Peoria earned \$300,000 in energy rebates from APS for employing high-efficiency building systems and for pursuing LEED certification. The certification was awarded based on the type of construction materials used, water-reduction measures, non-potable water use, high-energy efficiency methods, air-quality ventilation systems, LED lighting and energy-measurement systems. For a complete list of all the accomplishments, visit www.peoriaaz.gov/LEED.

SRP Seeks Power Line Route for Chandler's Price Road Corridor

[Arizona Republic, Nov. 18] Salt River Project sent letters to landowners this month in an attempt to secure a route for power lines that will provide electricity to Chandler's Price Road Corridor and keep the high-tech industrial area humming into the future. Time is of the essence. SRP expects the growing economic hub to need more power by 2017. The corridor is home to some of Chandler's largest employers, including Intel, Air Products, Orbital Sciences and Rogers Corp. The problem lies in where to place the power lines. The project has been delayed several times as Chandler residents raised concerns about power lines going through their neighborhoods. Hundreds attended SRP's public meetings, and several Sun Lakes homeowners associations hired an attorney last year to fight the power lines in their community. By mid-2013, SRP agreed to pursue an alternative route across the Gila River Reservation. While Chandler does not have authority over the issue, city officials also prefer the Gila River route, city spokeswoman Jane Poston said.

SRP Powers Up New Solar Energy Deal

[Arizona Republic, Nov. 21] [Salt River Project](#) will buy power from a new solar energy project under construction near Florence for a price that approaches costs from traditional natural-gas facilities, [reports The Arizona Republic](#). The purchase agreement with Sandstone Solar Power will average about 5.3 cents a kilowatt-hour for SRP, or approximately \$65 million over the 21-year life of the deal. The solar plant's capacity will be 45 megawatts. That's enough energy to power 11,250 homes at once with the sun shining.

Energy Efficiency Finance Forum

May 31-Jun. 2 San Francisco, CA

Green Building Lecture Series

Granite Reef Senior Center
Scottsdale, AZ

ASHRAE Annual Conference

Jun. 27-Jul.1 Atlanta, GA

RES Las Vegas

Mar. 9-12 Las Vegas, NV

ACEEE Summer Study on Energy Efficiency in Industry

Aug. 4-6 Buffalo, NY

ACEEE National Conference on Energy Efficiency as a Resource

Sep. 20-22 Little Rock, AR

World Energy Engineering Congress (WEEC)

Sep. 30 – Oct. 2 2015
Orlando, FL

ASU Sustainability Series Events

Green Building Lecture Series

Scottsdale, AZ

UPCOMING INTERNATIONAL BUSINESS EVENTS

Arizona Border Economic Summit

Dec. 2 Phoenix, AZ

Tribes Seek Further EPA Protection from Pollution

[Arizona Republic, Nov. 19] Members of the Navajo Nation and other regional tribes called Wednesday for more aggressive curbing of pollution from power plants on their land, though some leaders say the supplement to the Clean Power Plan is a good start. The U.S. Environmental Protection Agency held a public hearing in Phoenix for a proposal that would affect Native American reservations and U.S. territories. The supplement adds to the June 2014 Clean Power Plan proposal, which sets specific goals for each state to reduce carbon-dioxide emissions by 2030. Arizona's proposed goal is one of the highest at a 52 percent reduction in its carbon intensity. The Navajo Nation would strive for a roughly 6 percent reduction focused on the coal-fired Navajo Generating Station in Arizona and Four Corners Power Plant in New Mexico. The South Point Energy Center on the Fort Mojave Reservation in Arizona and the Bonanza Power Plant on the Uintah and Ouray Reservation in Utah are also targeted in the supplement. More than 50 people spoke at Wednesday's hearing, many of them members of northern Arizona, Utah and New Mexico tribes. They addressed the panel in English and indigenous languages about hazy skies, trouble breathing and health problems from pollution. Some called for higher emission-reduction goals, emphasizing that the jobs supplied, cheap energy produced and water provided by the plants come with health and environmental costs for indigenous people.

ALTERNATIVE ENERGY & EFFICIENCY

Fort Drum Powered by Wood in Renewable Energy Push

[Associated Press, Nov. 23] Bulldozers rumble up and down steaming mountains of wood chips 24 hours a day, stoking the boilers that provide electricity to all 168 square miles of Fort Drum, home of the Army's 10th Mountain Division. The 60-megawatt biomass power plant is providing 100 percent of the electricity for the sprawling northern New York base starting this month. It's the first green energy project to come online since the Pentagon's 2012 commitment to developing 3 gigawatts of renewable energy — enough to power 750,000 homes — on Army, Navy and Air Force installations by 2025 as a way to help ensure the military's energy security. "It's part of a comprehensive effort by the entire Army to improve our resiliency," Richard Kidd, deputy assistant secretary of the Army, said last month at a ceremonial signing of the project's 20-year, \$289 million contract. ReEnergy Holdings acquired the formerly coal-fired power plant at Fort Drum in 2011 and spent \$34 million converting it to burn biomass — mostly chipped up branches, bark and other residues of timber operations in New York's North Country. A \$12 million project is also underway to connect the plant directly to the base's substations next summer. The Pentagon is pushing construction of independent power grids at military bases out of concern that utility companies are vulnerable to hackers, terrorists and natural disasters.

NRG Seeks To Cut 90% of Its Carbon Emissions

[New York Times, Nov. 20] NRG, which built a leading electricity business from coal and other conventional power plants, is aiming to reduce its carbon emissions 50 percent by 2030 and 90 percent by 2050, the company said on Thursday. David Crane, the company's chief executive, made the announcement at a ceremony breaking ground for the company's new headquarters in Princeton, N.J., conceived as a green-energy showcase that will open in 2016. "The power industry is the biggest part of the problem of greenhouse gas emissions, but it has the potential to be an even bigger part of the solution," Mr. Crane said in an interview before the announcement. Since 2005, the company has reduced its carbon emissions 40 percent, executives say, and the new goals would use this year's projected level of 125 million metric tons as a baseline. Few power companies have made similar commitments, although they have become common in corporate America and are part of the impetus for NRG's move. Businesses like Coca-Cola, Google and Walmart are increasingly looking to buy or produce more green energy as a way of reducing their carbon footprints, creating a potentially lucrative market for companies like NRG. This week, for instance, [Ikea announced](#) it had bought a second wind farm in the United States, part of its goal of, by 2020, producing as much renewable energy as the company consumes globally.

Solar and Wind Energy Start To Win on Price vs. Conventional Fuels

[New York Times, Nov. 23] For the solar and wind industries in the United States, it has been a long-held dream: to produce energy at a cost equal to conventional sources like coal and [natural gas](#). That day appears to be dawning. The cost of providing electricity from wind and [solar power](#) plants has plummeted over the last five years, so much so that in some markets renewable generation is now cheaper than coal or [natural gas](#). Utility executives say the trend has accelerated this year, with several companies signing contracts, known as power purchase

agreements, for solar or wind at prices below that of natural gas, especially in the Great Plains and Southwest, where wind and sunlight are abundant. Those prices were made possible by generous subsidies that could soon diminish or expire, but recent analyses show that even without those subsidies, alternative energies can often compete with traditional sources. In Texas, Austin Energy signed a deal this spring for 20 years of output from a solar farm at less than 5 cents a kilowatt-hour. In September, the Grand River Dam Authority in Oklahoma announced its approval of a new agreement to buy power from a new wind farm expected to be completed next year. Grand River estimated the deal would save its customers roughly \$50 million from the project. And, also in Oklahoma, American Electric Power ended up tripling the amount of wind power it had originally sought after seeing how low the bids came in last year.

[Solar Panels That Configure Themselves](#)

A new solar power system is easy to add to a roof, and performs its own safety checks.

[MIT Tech Review, Nov. 20] Installation costs more than hardware for a typical solar installation. Researchers from the Fraunhofer Institute install novel, flexible solar panels with an adhesive backing and quick-connect cables. Ordinarily, installing and connecting a new array of rooftop solar panels takes days, weeks, or even months because the hardware is complex and various permits are needed. Yesterday, on a frigid day in Charlestown, Massachusetts, researchers completed the process in about an hour. Homeowners can install the system themselves, by gluing it to a rooftop. The permitting is handled by a combination of electronic sensors and software that communicates with local jurisdictions and utilities. Installation and permit-related expenses currently account for more than half of the overall cost of a new solar power setup. "By simplifying the system so that it's like installing an appliance, we envision that the soft cost will be virtually eliminated," says [Christian Hoepfner](#), director of the Fraunhofer Center for Sustainable Energy Systems, which developed the system. Doing so would lower the cost of a typical residential solar installation from \$22,000 to as little as \$7,500, he says. "It's impressive to see how quickly the installation went up," [Fouad Dagher](#), manager of new products and services at the utility National Grid, said after the demonstration. "It makes it easier for consumers and utilities." Solar power can be dangerous if not installed properly. Heavy components may be blown off a roof if not secured properly, and solar panels can produce potentially deadly voltages if not properly grounded, and every wire protected. The Fraunhofer system uses light, flexible solar panels encased in durable plastics. The panels can be securely attached to a shingled roof via an adhesive backing that anchors the panels even in winds up to 110 miles per hour.

[U.S. Planning Largest Wind-Energy Auction off Massachusetts](#)

[Bloomberg, Nov. 24] The U.S. Interior Department is planning the nation's largest competitive auction for offshore wind projects, 742,000 acres off Massachusetts that may generate as much as 5 gigawatts of electricity. The area will be divided into four zones and may produce enough power for 1.4 million homes, the department said today in an e-mailed statement. Twelve companies, including Fishermen's Energy LLC, Deepwater Wind LLC and Iberdrola SA (IBE), are qualified to bid on the areas about 14 miles off the coast. The auction is scheduled for Jan. 29. "This sale will triple the amount of federal offshore acreage available for commercial-scale wind-energy projects," Interior Secretary Sally Jewell said in the statement. The department's Bureau of Ocean Energy Management has awarded seven leases -- two through non-competitive bids -- for projects in the Atlantic Ocean, including Cape Wind in Nantucket Sound. Five competitive sales for more than 357,000 acres off Maryland, Virginia and New England have generated more than \$14 million.

ENERGY/GENERAL

[China To Invest Up Billions in Mexico Energy Sector](#)

[Electric, Light & Power, Nov. 14] Mexico and China have signed 14 cooperation agreements that will see up to \$14 billion in investment in Mexico's energy, mining, infrastructure, telecom and tourism sectors, according to Business News Americas. The deals were inked during Mexican President Enrique Peña Nieto's state visit to China to attend the APEC summit. China and Mexico agreed to set up a \$2.4 billion binational investment fund for energy, mining, infrastructure, technology and tourism — and this could grow to \$9 billion, a Mexican government press release said. The Sino-Mex Energy Fund — a \$5 billion energy and infrastructure investment fund set up by Mexico's NOC Pemex and Chinese state-owned firms in May — was also officially launched. The fund was created by Pemex unit PMI and Chinese companies Xinxing Ductile Iron Pipes and SPF Capital Hong Kong, the latter in the role of fund manager. The fund is the largest Chinese fund in Latin America, Pemex CEO Emilio Lozoya Austin said in May in a statement submitted to Mexico's stock exchange commission. Hong-Kong based Honghua Group announced on Thursday it will pump \$150 million into the Sino-Mex Energy Fund.

[Cheap-Oil Era Tilts Geopolitical Power to U.S.](#)

[Bloomberg, Nov. 19] A new age of abundant and cheap energy supplies is redrawing the world's geopolitical landscape, weakening and potentially threatening the legitimacy of some governments while enhancing the power of others. Some changes already are evident. Surging U.S. oil production enabled America and its allies to impose tough sanctions on Iran without having to worry much about the loss of imports from the Middle Eastern nation. Russia, meanwhile, faces what President Vladimir Putin called a possibly "catastrophic" slump in prices for its oil as its economy is battered by U.S. and European sanctions over its role in Ukraine. "A new era of lower prices is being ushered in" by the U.S. shale oil and gas revolution, Ed Morse, global head of commodities research for Citigroup Inc. in New York, said in an e-mail. "Undoubtedly some of the geopolitical changes will be momentous." They certainly were a quarter of a century ago. Plunging oil prices in the latter half of the 1980s helped pave the way for the breakup of the Soviet Union by robbing it of revenue it needed to survive. The depressed market also may have influenced Iraqi leader Saddam Hussein's decision to invade fellow producer Kuwait in 1990, triggering the first Gulf War. Russia again looks likely to suffer from the fallout in oil markets, along with Iran and Venezuela, while the U.S. and China come out ahead.

[A Dam Revival, Despite Risks](#)

Private Funding Brings a Boom in Hydropower, With High Costs

[New York Times, Nov. 19] While some dams in the United States and Europe are being decommissioned, a dam-building boom is underway in developing countries. It is a shift from the 1990s, when amid concerns about environmental impacts and displaced people, multilateral lenders like the World Bank backed away from large hydroelectric power projects. World hydropower production will grow from 4,000 terawatt hours now — about the annual power output of the United States — to 4,670 terawatt hours in 2020, according to Maria van der Hoeven, executive director of the International Energy Agency, in Paris. The Intergovernmental Panel on Climate Change predicts that hydropower generation will double in China between 2008 and 2035, and triple in India and Africa. The World Bank and other international lenders were the most important financiers of large dams before the '90s lull. But although the World Bank has in recent years increased its investment in hydropower from a low of just a few million dollars in 1999 to about \$1.8 billion in 2014, it still funds only 2 percent of hydropower project investment today. Picking up the slack are national development banks from emerging countries such as China, Brazil, Thailand, and India, and private investors. Public-private partnerships are on the rise, generally with the support of regional development banks.

INDUSTRIES AND TECHNOLOGIES

[Halifax Water Generates Power from A 32-Kw in-Pipe Small Hydroelectric System](#)

[Hydroworld.com, Nov. 17] HALIFAX, Nova Scotia – Halifax Regional Municipality of Nova Scotia, Canada, is the first Canadian city to use an in-pipe hydroelectric generation system within a pressurized water distribution pipeline, according to Halifax Water. On Nov. 13, a 32-kW generating system within a drinking water distribution control chamber for Halifax Water began providing power. Stakeholders for the Halifax project hope the system will power about 30 homes and produce US\$29,000 in revenue annually. Officials said the project cost US\$443,000 and Halifax Water; Denver, Colo.-based Water Research Foundation and the provincial government provided the funding. Halifax Water serves the municipality's 355,000 residents. The regulated municipality contracted Rentricity Inc., a New York-based renewable energy company, to install the in-pipe system that is rated "safe for drinking water." The device's viability for placement in a system from which people consume drinking water is based on Canadian and international safety standards.

[Index Ranks States on Future-Readiness of Grid](#)

[Fierce Smart Grid, Nov. 19] The GridWise Alliance (GWA) and the Smart Grid Policy Center (SGPC) have released their 2014 Grid Modernization Index (GMI) ranking states based on their progress in modernizing their electric systems with smart grid technologies. The GMI applies a clearly defined set of criteria to evaluate the progress of state grid modernization efforts in three key areas: policy, customer engagement and grid operations. The index defines state support as policies and regulatory mechanisms that facilitate grid investment; customer engagement as investments in customer-enabling technologies and capabilities; and grid operations as investments in grid-enhancing technologies and capabilities. Last year was the first time the GWA and SGPC published the GMI based upon the degree to which the states and the District of Columbia had progressed toward the "Grid of the Future." The GMI is designed with future requirements for a modernized electric grid in mind. This year's Index ranks all 50 states and the

District of Columbia. As in 2013, California and Texas tied for the highest overall score. Illinois, Pennsylvania, Maryland, Delaware, Nevada, the District of Columbia, Arizona, and Virginia round out the top ten.

[NREL Teams with SolarCity To Maximize Solar Energy on Power Grids](#)

[Electric Light & Power, Nov. 20] The Energy Department's National Renewable Energy Laboratory (NREL) and SolarCity have entered into a cooperative research agreement to address the operational issues associated with large amounts of distributed solar energy on electrical grids. The work includes collaboration with the Hawaiian Electric Companies to analyze high penetration solar scenarios using advanced modeling and inverter testing at the Energy Systems Integration Facility. The project is funded in part through an Energy Department solar cost-share program. The ESIF on NREL's Golden, Colorado campus, houses a broad array of capabilities and laboratories focused on energy integration research including megawatt-scale power hardware-in-the-loop testing, which will allow researchers to analyze the behavior of distributed generation and distribution devices while connected to a testing system that dynamically emulates the characteristics of a power system. Testing with SolarCity and Hawaiian Electric at ESIF will cover the dynamics between inverter-based assets on a grid system, voltage regulation, and bi-directional power flows. Scientists and engineers from SolarCity and Hawaiian Electric were at NREL in September to kick off the research project and in October for a follow-up meeting.

LEGISLATION AND REGULATION

[China Buying REC Solar for \\$640 Million Avoids Trade Spat](#)

[Bloomberg, Nov. 24] A Chinese company offered 4.34 billion kroner (\$640 million) to buy REC Solar ASA (RECSOL), one of the last makers of solar panels in Western hands, a move that may help circumvent trade disputes in the U.S. and Europe. The deal by a unit of China National Chemical Corp. would follow a surge in demand for solar panels, absorbing much of the production that companies supported by the government in Beijing built in the past decade. Authorities in Brussels and Washington have imposed restrictions on Chinese solar panel imports after accusations from competitors that products were sold below cost. That has required Chinese companies that dominate the panel manufacturing industry to establish subsidiaries with factories abroad that are outside sanctions. "More such cases are likely to follow, given Chinese companies have a need to bypass international trade disputes and to penetrate local markets," said Xiaoting Wang, an analyst at Bloomberg New Energy Finance in Hong Kong. "Chinese companies will maintain their dominant position in the PV manufacturing industry by owning more overseas capacities." The deal was recommended by REC Solar's board and has pledges from holders of 20.2 percent of the outstanding shares not to sell before a general meeting convened to approve the transaction, according to a statement released by the two companies in Oslo.

[Clean Power Plan To Hit Energy-Intensive Industries Hard](#)

[Fierce Energy, Nov. 24] The U.S. Environmental Protection Agency's (EPA) proposed Clean Power Plan is the latest in a series of regulations that, in conjunction with rising natural gas prices, will increase the cost of electricity and natural gas by nearly \$300 billion in 2020 compared with 2012, according to a study by Energy Ventures Analysis for Peabody Energy, which demonstrates the heavy financial burden the EPA's regulations will put on American families, businesses and manufacturers through spiking energy costs. According to the study, which uses 2012 as the base year to match the EPA's base year for the Clean Power Plan analysis, the typical household's annual electricity and natural gas bills would increase by \$680 -- or 35 percent -- from 2012 compared to 2020, escalating each year thereafter as EPA regulations become more stringent. In states that have implemented deregulation of wholesale electric power markets, where the price of electricity will rise to the marginal cost to support new generating capacity, costs will increase the most, the study says. In fact, the report identified a \$177 billion increase in electricity costs and a \$107 billion increase in natural gas costs in 2020 compared with 2012 when the cumulative effects of EPA regulations and energy market impacts are analyzed, and concludes that U.S. power markets would see a shift in electricity generation from coal to natural gas, causing upward pressure on natural gas demand and prices.

[Heinrich Introduces Bill To Modernize Nation's Electric Transmission Grid](#)

[Energy Central, Nov. 21] The office of Sen. Martin Heinrich, D-N.M., issued the following news release: Today, U.S. Senator Martin Heinrich (D-N.M.), a member of the Senate Energy and Natural Resources Committee, introduced a bill (S. 2947) to remove barriers to creating a cleaner, more consumer-friendly electric grid. The bill clarifies that the Federal Energy Regulatory Commission (FERC) has the legal authority to require regional grid operators in

interstate wholesale markets to allow consumers to be compensated for voluntarily reducing their electricity consumption—a tool referred to as demand response. By providing incentives for consumers to reduce their use of power, demand response lowers overall electricity costs, improves reliability and efficiency, and reduces emissions. "Modernizing our electrical grid is central to becoming a nation that's more energy efficient and provides cost savings for everyone," said Sen. Heinrich. "There is no kilowatt-hour more valuable than the one you don't use in the first place. This bill is a small fix but with big implications for growing the economy, and is central to slowing the effects of climate change and creating a healthier environment for future generations." There are currently six multi-state independent grid operators, primarily in the East, Midwest and California, that are responsible for assuring the reliability of the power supplied to the local utility companies and keeping the cost of power down. FERC's authority to regulate these interstate markets for electricity arises under the 80-year old Federal Power Act.

[Major Energy Rule Timelines Pushed Back](#)

[The Hill, Nov. 24] The Obama administration is pushing back its timeline for issuing major energy regulations from the Interior Department and the Securities and Exchange Commission (SEC). The delays, announced late Friday in the administration's semi-annual regulatory agenda update, mean energy companies will have to wait months longer for rules on oil and gas drilling on federal land, protecting streams from mountaintop removal mining, disclosing payments to foreign governments and other actions. Interior's long awaited stream protection rule will now be proposed in April, the White House Office of Management and Budget (OMB) said. In the last regulatory update in the spring, OMB expected the proposal to be made public in December. The stream protection rule would put new restrictions on mountaintop removal mining, a practice popular in Appalachia that environmentalists say harms streams. It is a re-write of a Bush administration rule that Obama aides found insufficient. The Securities and Exchange Commission, meanwhile, is once again delaying its rules to require that companies disclose payments to foreign governments for extractive resources oil, natural gas or minerals.

[Renewable Fuels Quotas for 2014 Delayed by EPA After Fight](#)

[Bloomberg, Nov. 21] The U.S. Environmental Protection Agency punted on setting quotas for the use of renewable fuels in 2014 and pledged to lay out next year targets for 2014-2016. Almost a year late in setting rules for using ethanol, biodiesel and cellulosic fuels in gasoline, the EPA today abandoned trying to act before year end. The agency could waive the requirements for 2014 altogether or accept whatever has been produced as meeting the mandate. "Finalization of the 2014 standards rule has been significantly delayed," EPA said in a statement published on its website today. "Due to this delay, and given ongoing consideration of the issues presented by the commenters, EPA is not in a position to finalize the 2014 RFS standards rule before the end of the year." Lobbyists for oil companies, who oppose the law that requires petroleum products to be displaced by other ingredients, said the EPA isn't capable of managing the program and urged Congress to scrap the law altogether.

WESTERN POWER

[BLM Rejects Solar Development in Silurian Valley](#)

[Bureau of Land Management, Nov. 20] The Bureau of Land Management (BLM) announced today it has rejected an application for a solar energy right-of-way in the Silurian Valley in San Bernardino County, Calif. The project application, submitted by a subsidiary of Iberdrola Renewables, LLC, had proposed a 200 megawatt photovoltaic solar project on 1,616 acres about 10 miles north of Baker along highway 127. The BLM determined that the solar project would not be in the public interest after undergoing a rigorous review process in accordance with the BLM's Western Solar Plan. The Plan, approved in October 2012, created Solar Energy Zones across the West where solar energy projects would be prioritized. The Plan does allow for solar development outside of Solar Energy Zones, however applications in these variance areas must go through a review process based on required factors specified in the Plan before determining if the area is suitable for solar development.

[Gulf Coast Embraces U.S. Coal Shippers Rejected by West](#)

When it comes to exporting American coal, the West Coast's loss is the Gulf Coast's gain. While environmental opposition has stymied plans to build terminals in California and the Pacific Northwest, the Mississippi River town of Darrow, [Louisiana](#), has a new \$300 million export facility. It's part of a regional expansion that will increase capacity by 66 percent to 119 million metric tons by 2017, or more than half the national total, according to New York-based Doyle Trading Consultants LLC. At least \$898 million, or 64 percent of the total \$1.4 billion companies such as Ambre Energy Ltd. were planning to invest on the West Coast, is being spent on

terminals in the [Gulf of Mexico](#). Even as U.S. coal exports have fallen by 23 percent since 2012, producers are betting that foreign sales will rebound because a supply glut means their prices are now below competing cargoes from Australia and South Africa. "In some parts of the U.S. you have the lowest cost coal in the world," Carlos Fernandez Alvarez, a senior coal analyst at the [International Energy Agency](#) in Paris, said by phone Nov. 7. "If you have the infrastructure to export that coal it will be competitive in many scenarios." Exports from Galveston, Texas, surged 29-fold since 2000 while volume at Mobile, Alabama doubled and New Orleans saw a more than 15-fold increase, government [data](#) show.

[HERO Program Adoption Soars in California](#)

PACE programs proliferating across the country

[Fierce Energy, Nov. 18] This week, 42 cities and counties across California launched the HERO Property Assessed Clean Energy (PACE) Program, enabling homeowners and commercial property owners to pay off energy- and water-efficiency improvements through their property tax bill. Since its inception in 2011, the HERO program has been adopted by more than 200 communities across the state. "Homeowners and policy makers across the state are embracing bold new approaches to fighting the drought and reducing carbon emissions, and we're excited to be part of the solution to meeting these important goals," said J.P. McNeill, CEO of Renovate America, the administrator of the HERO Program. "We help people make upgrades to their homes so they can use the most current technology to reduce water consumption and energy use. With our program, homeowners don't need to make a big initial investment to improve their property and save money and resources." As California's drought shows little signs of abating, HERO-eligible retrofits offer homeowners a fast, affordable way to lower their water bill and conserve critical resources with products ranging from high-efficiency toilets to drought-tolerant landscaping. Property owners repay the assessment over five to 20 years interest free through their property tax bill. These energy-efficiency projects have helped save 140 GW hours of energy and offset more than 35,000 tons of carbon dioxide emissions annually.

[Ivanpah Solar Power Plant Not Generating As Much Power As Expected](#)

Associated Press, Nov. 18] LOS ANGELES (AP) — The largest solar power plant of its type in the world — once promoted as a turning point in renewable energy — isn't producing as much energy as planned. One of the reasons is as basic as it gets: The sun isn't shining as much as expected. Sprawling across roughly 5 square miles of federal desert near the California-Nevada border, the Ivanpah Solar Electric Generating System opened in February, with operators saying it would produce enough electricity to power a city of 140,000 homes. So far, however, the plant is producing about half of its expected annual output for 2014, according to calculations by the California Energy Commission. It had been projected to produce its full capacity for 8 hours a day, on average. "Factors such as clouds, jet contrails and weather have had a greater impact on the plant than the owners anticipated," the agency said in a statement. It could take until 2018 for the plant backed by \$1.6 billion in federal loan guarantees to hit its annual peak target, said NRG Energy Inc., which operates the plant and co-owns it with Google Inc. and BrightSource Energy. "During startup we have experienced ... equipment challenges, typical with any new technology, combined with irregular weather patterns," NRG spokesman Jeff Holland said in a statement. "We are confident that Ivanpah's long-term generation projections will meet expectations." The technology used at Ivanpah is different than the familiar photovoltaic panels commonly used for rooftop solar installations. The plant's solar-thermal system — sometimes called concentrated-solar thermal — relies on nearly 350,000 computer-controlled mirrors at the site, each the size of a garage door. The mirrors reflect sunlight to boilers atop 459-foot towers — each taller than the Statue of Liberty. The resulting steam drives turbines to create electricity. When the \$2.2 billion complex opened, Energy Department Secretary Ernest Moniz called it a "symbol of the exciting progress" in renewable energy. While the agency still says the project remains in good standing, Kaitlin Meese, an analyst at research firm Bentek Energy, said its early production figures "do not paint a strong picture for solar-thermal technology development." The operation of such plants is highly dependent on weather conditions, and predicting when and how strongly the sun will shine is not a perfect science.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package,

groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- [Job Training](#)
- [Quality Jobs](#)
- [Qualified Facility](#)
- [Computer Data Center Program](#)
- [Research & Development](#)
- [Foreign Trade Zone](#)
- [Military Reuse Zone](#)
- [Angel Investment](#)
- [Renewable Energy Tax Incentive](#)
- [Healthy Forest](#)
- [Sales Tax Exemption for Machinery and Equipment](#)
- [Lease Excise](#)
- [Additional Depreciation](#)
- [Work Opportunity](#)
- [Commercial/Industrial Solar](#)
- [SBIR/STTR](#)
- [Private Activity Bonds](#)
- [QECB's](#)

(ACA) PROGRAMS

DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#)

DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- [Nuclear Energy University Programs - Fellowship and Scholarship](#) – Response due Nov. 30, 2015
- [Advanced Fossil Energy Projects](#) - Solicitation Number: DE-SOL-0006303 Expiration Date: Nov. 30, 2016
- [SBIR/STTR 2014 Phase II Release 1 Funding Opportunity #](#): DE-FOA-0001193 Close Date: 12/9/2014
- [FY2015 Grant Funding Announcement - Indian Environmental General Assistance Program](#) - Grant Proposals must be submitted in GAP Online by Dec. 10, 2014
- [NSF/DOE Partnership on Advanced Frontiers in Renewable Hydrogen Fuel Production Via Solar Water Splitting Technologies 2014-2016](#) - Close Date: Dec. 11, 2014
- **DUE SOON!** [Environmental Justice Small Grants Program \(EPA-OECA-OEJ-15-01\)](#) – Applications due December 15, 2014
- **DUE SOON!** [WaterSMART: Title IV Water Reclamation and Reuse Program \(R15AS00009\)](#) – Application due December 15, 2014

- [Targeted Algal Biofuels and Bioproducts \(TABB\)](#) - Dec 15, 2014 Submission Deadline for Concept Papers: 10/30/2014 at 5:00 P.M. Eastern Standard Time Submission Deadline for Full Applications: 12/15/2014 at 5:00 P.M. Eastern Standard Time
- **DUE SOON!** [Sustainable and Holistic Integration of Energy Storage and Solar Photovoltaics \(DE-FOA-0001108\)](#) – *Concept Paper due December 16, 2014*
- [Jobs Plus Pilot Program](#) - This Notice of Funding Availability (NOFA) announces the availability of funding of approximately \$24 million for the Jobs Plus Pilot program for Public Housing Agencies (PHAs) to develop locally-based approaches to increase earnings and advance employment outcomes for Public Housing residents. The NOFA will fund initiatives to improve employment and earnings outcomes for Public Housing residents through supports such as work readiness, employer linkages, job placement and financial literacy. Of the \$24 million available, \$9 million is made available from the ROSS appropriations to support the services element of the Jobs-Plus Pilot program. Funding Opportunity Number: FR-5800-N-24 Deadline Date: December 17, 2014
- **DUE SOON!** [Brownfields Assessment and Cleanup \(EPA-OSWER-OBLR-14-07\)](#) – Applications due December 19, 2014
- **NEW!** [Accelerating Industry-Led Regional Partnerships for Talent Development \(EDAREGIONALTALENT2014\)](#) – Applications due January 9, 2015
- [Buildings Energy Efficiency Frontier & Innovation Technologies \(BENEFIT\) - 2015](#)
Close Date: 01/12/2015 Funding Number: DE-FOA-0001166
- [Landscape Design for Sustainable Bioenergy Systems Department of Energy](#)
Close Date: 01/12/2015
- **NEW!** [WaterSMART: Water and Energy Efficiency Grants for FY 2015](#) Funding Opportunity #:R15AS00002 Close Date: 01/14/2015
- [Solid-State Lighting Advanced Technology Research and Development 2015](#)
Close Date: 01/15/2015
- [Community-Scale Air Toxics Ambient Monitoring \(EPA-OAR-OAQPS-15-01\)](#) - Applications due January 5, 2015
- [Advancing Solutions to Improve the Energy Efficiency of U.S. Commercial Buildings](#)
Close Date: 01/20/2015
- [Wood Innovations](#) Close Date: 1/23/2015
- **NEW!** [Buildings University Innovators & Leaders Development \(BUILD\) – 2015](#)
Funding Opportunity #:DE-FOA-0001167 Concept Papers due December 19, 2014
Close Date: 1/28/2015
- **NEW!** [Building America Industry Partnerships for High Performance Housing Innovation](#) Funding Opportunity #:DE-FOA-0001117 Close Date: 02/04/2015
- **NEW!** [Choice Neighborhoods Implementation Grant Program \(FR-5800-N-11\)](#) – Applications due February 9, 2015
- **NEW!** [Powering Agriculture: An Energy Grand Challenge for Development \(AID-SOL-OOA-00005\)](#) – Applications accepted between December 8, 2014 through February 12, 2015
- **NEW!** [Sustainable and Holistic Integration of Energy Storage and Solar PV \(SHINES\)](#)
Close Date: 3/19/15
- [Repowering Assistance Program](#) - Ongoing

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| | <ul style="list-style-type: none">• Rural Business Enterprise Grants - Ongoing• Rural Business Opportunity Grants - Ongoing• Sustainable Agriculture Research and Education Grants - Ongoing• Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines• U.S. Dept. of Agriculture - Rural Development Grant Assistance• Green Refinance Plus – Ongoing• National Science Foundation Funding Opportunities |
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